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ABSTRACT

Findings from the 1987 Early National Estimates survey of more than 600 institutions of higher education show that the U.S. higher education enrollment continues to hold steady even though the traditional college-age population of 18- to 24-year-olds is still declining. The data also show that: (1) total college enrollment is approximately 12.5 million students; (2) degree awards at each level remained stable in academic year 1987, except for associate degrees, which declined 4% from the previous year; (3) revenues and expenditures increased 5% and 6%, respectively, in fiscal year 1987; and (4) compared to the national averages on revenues and expenditures, percent increases were higher among private four-year institutions and lower among public two-year institutions. Data are presented in three tables, and an appendix describes the survey methodology. (KM)

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CENTER FOR EDUCATION STATISTICS

Early Estimates

December 1987

National Estimates of Higher Education Statistics : 1987

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The Nation's higher education enrollment continues to hold steady even though the traditional college-age population of 18- to 24-year-olds is still declining. Early National Estimates data indicate that:

- The projected enrollment decline in higher education has not occurred. It is estimated that 12.5 million students attended college this fall.
- Degree awards at each level remained stable in academic year 1987, with the exception of associate degrees, which declined 4 percent from academic year 1986.
- Revenues and expenditures increased 5 and 6 percent, respectively, in fiscal year 1987. Compared with these national averages, percent increases were higher among private 4-year institutions and lower among public 2-year institutions.

These findings come from the Early National Estimates sample of more than 600 institutions of higher education, which were surveyed by telephone this fall. The data and findings in this report are *early estimates* and subject to change. Actual data for the entire universe of institutions will be available in the fall of 1988. (See appendix for more information.)

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Enrollment

Based on the decline in the population of 18- to 24-year olds since 1981,[1] CES projected in 1982 that college enrollment would decline slightly from 1982 to 1987.[2] Some institutions have been responding to the expected decline in the number of students by targeting courses toward part-time students and women and by actively marketing and recruiting students to maintain enrollment.

The 1987 Early National Estimates survey indicates that the expected decline in higher education enrollment did not occur. In fact, the estimated number of students enrolled this fall in the Nation's colleges and universities was 12.5 million--remaining at an all-time high level. Women were 53 percent of all college students in fall 1987, and part-time students accounted for 42 percent of the total (derived from table 1).

Enrollment estimates are shown in table 1 for fall 1987 and fall 1986 by various categories. Although the estimates for 1987 are higher in most cases than those for 1986, the differences are not statistically significant at the 95 percent confidence level. Therefore, enrollment is most accurately characterized as stable overall.

Postsecondary Education Statistics Division

[1] U.S. Department of Commerce, Bureau of the Census, *School Enrollment--Social and Economic Characteristics of Students*, Current Population Reports, Series P-20, 1980 to 1986.

[2] U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, Volume 1, 1982, p. 39.

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Table 1.--Estimates of enrollment in institutions of higher education, by attendance status, by sex, and by attendance level of student, and by control and level of institution: Fall 1986 and 1987

(In thousands)

Control and level of institution	Total (estimate)	Attendance status		Sex		Attendance level	
		Full-time (estimate)	Part-time (estimate)	Men (estimate)	Women (estimate)	Undergraduate (estimate)	Postbaccalaureate (estimate)
Total, 1987	12,544	7,219	5,325	5,881	6,663	10,895	1,649
Total, 1986	12,398	7,148	5,249	5,840	6,557	10,724	1,674
Percent change*	1	1	1	1	2	2	-1
Control							
Public							
1987	9,706	5,206	4,500	4,468	5,238	8,706	1,001
1986	9,600	5,155	4,446	4,457	5,144	8,577	1,024
Percent change*	1	1	1	--	2	2	-2
Private							
1987	2,838	2,013	825	1,413	1,425	2,190	648
1986	2,797	1,994	804	1,383	1,414	2,147	650
Percent change*	1	1	3	2	1	2	--
Level							
4-year							
1987	7,816	5,461	2,355	3,802	4,013	6,167	1,649
1986	7,754	5,419	2,335	3,805	3,949	6,080	1,674
Percent change*	1	1	1	--	2	1	-1
2-year							
1987	4,728	1,759	2,970	2,078	2,650	4,728	0
1986	4,644	1,730	2,914	2,035	2,609	4,644	0
Percent change*	2	2	2	2	2	2	--
Selected control/levels**							
Public 4-year							
1987	5,268	3,671	1,596	2,546	2,722	4,267	1,001
1986	5,254	3,658	1,596	2,568	2,686	4,231	1,024
Percent change*	--	--	--	-1	1	1	-2
Private 4-year							
1987	2,548	1,789	759	1,257	1,291	1,900	648
1986	2,499	1,761	738	1,237	1,262	1,849	650
Percent change*	2	2	3	2	2	3	--
Public 2-year							
1987	4,439	1,535	2,904	1,922	2,516	4,439	0
1986	4,346	1,497	2,849	1,888	2,457	4,346	0
Percent change*	2	3	2	2	2	2	--

--Less than 0.5 percent.

*None of the percent changes are statistically different from zero at the 95 percent confidence level. Percent changes were calculated on actual, not rounded, values.

**Data for private 2-year institutions are not shown separately because the number of institutions sampled was small and the standard errors large.

NOTE: Details may not add to totals because of rounding.
Postbaccalaureate includes graduate and first-professional enrollment.
The 95 percent confidence intervals, expressed as a percent of the total estimates, are ± 1.7 percent for fall 1987 and ± 1.0 percent for fall 1986.

SOURCE: U.S. Department of Education, Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Sample Survey of Early National Estimates, 1986 and 1987.

Degrees Conferred

The total number of degrees conferred (associate and higher) was 1,813,000 in academic year 1987, down a slight 1 percent from the year before (table 2). Associate degrees was the only category of awards to show a sizeable drop (4 percent) between 1986 and 1987. Total conferrals at the bachelor's, master's, doctor's, and first-professional levels showed no statistically significant change at the 95 percent confidence level.

Associate degrees

Associate degree awards dropped for the second year in a row. Their decline of 4 percent (18,600) in 1987 was more than double the decline (8,700) between 1985 and 1986.[3] Both men and women experienced the 4 percent drop in degrees; this meant that women retained their 56 percent share of awards--the largest of any degree level. Public institutions, which awarded four-fifths of all associate degrees, had a much larger loss in the number of awards than their private counterparts. Most of these losses were at community colleges since these schools offer the most associate degree programs.

Bachelor's degrees

Although the number of bachelor's degrees conferred remained stable between 1986 and 1987, awards to men dropped 2 percent while awards to women increased 2 percent. The 2 percent decline for men follows 5 consecutive years of increase. Women have made annual gains in bachelor's degree awards for over a decade, earning just over one-half of these awards since 1982.[4] And 1987 was no exception: women received 512,000 awards, their largest number ever, and now account for 52 percent of all degree recipients at this level. Private institutions reported a 3 percent increase in bachelor's degree awards to women, while awards to women at public institutions grew only 1 percent.

Postbaccalaureate degrees

Awards at the master's, doctor's, and first-professional levels were stable between 1986 and 1987. In 1987, women received 51 percent of the master's degrees and 35 percent of the doctor's and first-professional degrees. Public institutions had significant increases of 3 percent or more in the number of women earning degrees at all postbaccalaureate levels.

Finance

The current funds revenues of institutions of higher education reached an estimated $108 billion in fiscal year 1987, and current funds expenditures and transfers totalled $106 billion (table 3). These increases represented changes of 5 percent in revenues and 6 percent in expenditures over the previous year. Compared with these overall national averages, however, percent increases were higher in private 4-year institutions and lower in public 2-year colleges.

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[3] U.S. Department of Education, Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, 1985 and 1986, unpublished tabulations.

[4] U.S. Department of Education, Center for Education Statistics, *Trends in Bachelor's and Higher Degrees, 1975-1985*, and Degrees and Other Formal Awards Conferred survey, 1986, unpublished tabulations.

Table 2.--Degrees conferred by institutions of higher education, by control of institution and by level of degree and sex of recipient: Academic years 1985-86 and 1986-87

(In thousands)

Level of degree and sex of recipient	Total			Public			Private		
	1985-86	1986-87 (estimate)	Percent change*	1985-86	1986-87 (estimate)	Percent change*	1985-86	1986-87 (estimate)	Percent change*
Total	1,830	1,813	-1 *	1,249	1,235	-1 *	581	578	-1
Men	897	875	-2 *	598	586	-2 *	298	289	-3 *
Women	933	938	--	650	649	--	283	289	2
Associate									
Total	446	427	-4 *	369	356	-4 *	77	72	-7
Men	196	188	-4 *	161	157	-3	35	31	-12 *
Women	250	240	-4 *	208	199	-4 *	42	41	-3
Bachelor's									
Total	988	987	--	659	656	--	329	331	--
Men	486	475	-2 *	325	318	-2 *	161	157	-2
Women	502	512	2 *	333	338	1 *	169	174	3 *
Master's									
Total	289	291	1	170	171	1	119	119	1
Men	144	142	-1	79	78	-1	64	64	--
Women	145	148	2	91	93	3 *	54	55	1
Doctor's									
Total	34	34	2	21	22	3 *	12	12	-1
Men	22	22	1	14	14	2	8	8	--
Women	12	12	2	8	8	4 *	4	4	-2
First-professional									
Total	74	74	--	30	30	--	44	44	--
Men	49	48	-2	19	19	-2 *	30	29	-3
Women	25	26	4	10	11	3 *	14	15	5

--Less than 0.5 percent.

*Only percent changes which are noted by an asterisk are statistically different from zero at the 95 percent confidence level. Percent changes were calculated on actual, not rounded, values. Caution should be exercised when collectively interpreting several percent changes noted by an asterisk. The confidence level that ALL of the percent changes being considered are statistically different from zero may be less than 95 percent.

NOTE: Details may not add to totals due to rounding.

The 95 percent confidence intervals, expressed as a percent of the total 1986-87 degree estimates, are as follows: total degrees (associate and higher) (± 0.8 percent), associate (± 2.7 percent), bachelor's (± 1.1 percent), master's (± 1.4 percent), doctor's (± 2.4 percent), and first-professional (± 3.3 percent). (See appendix for more information.) The confidence interval percents for each estimate are available upon request.

SOURCE: U.S. Department of Education, Center for Education Statistics, 1985-86 data are from the Higher Education General Information Survey (HEGIS), Degrees and Other Formal Awards Conferred Between July 1, 1985 and June 30, 1986; 1986-87 data are from the Integrated Postsecondary Education Data System (IPEDS), Sample Survey of Early National Estimates, 1987.

Table 3.--Current funds revenues and current funds expenditures and transfers in institutions of higher education, by control and level of institution: Fiscal years 1986 and 1987

(Amounts in thousands)

Control and level of institution	Current funds revenues			Current funds expenditures and transfers		
	Fiscal year 1986	Fiscal year 1987 (estimate)	Percent change*	Fiscal year 1986	Fiscal year 1987 (estimate)	Percent change*
Total	$103,002,664	$108,288,120	5 *	$100,100,789	$106,424,547	6 *
Control:						
Public	66,878,087	69,834,289	4 *	65,067,309	68,453,203	5 *
Private	36,124,577	38,453,831	6 *	35,033,480	37,971,344	8 *
Level:						
4-year	89,913,144	94,810,388	5 *	87,329,379	93,397,858	7 *
2-year	13,089,520	13,477,732	3	12,771,410	13,026,689	2
Selected control/levels:**						
Public 4-year	54,960,806	57,673,675	5 *	53,398,542	56,643,881	6 *
Private 4-year	34,952,338	37,136,713	6 *	33,930,837	36,753,978	8 *
Public 2-year	11,917,281	12,160,614	2	11,668,767	11,809,323	1

*Only percent changes which are noted by an asterisk are statistically different from zero at the 95 percent confidence level.

**Data for private 2-year institutions are not shown separately because the number of institutions sampled was small and the standard errors large.

NOTE: Details may not add to totals due to rounding.

These data are not directly comparable to the data from previous years presented in other CES publications, such as the Digest of Education Statistics, from which duplicate Pell grant disbursements have been removed.

The 95 percent confidence intervals, expressed as a percent of the total fiscal year 1987 estimates, are ± 1.0 percent for revenues and ± 1.0 percent for expenditures and transfers. (See appendix for more information.) The confidence interval percents for each estimate are available upon request.

SOURCE: U.S. Department of Education, Center for Education Statistics, Fiscal year 1986 data are from the Higher Education General Information Survey (HEGIS), Financial Statistics of Institutions of Higher Education for Fiscal Year 1986; Fiscal year 1987 data are from the Integrated Postsecondary Education Data System (IPEDS), Sample Survey of Early National Estimates, 1987.

Appendix

Survey Methodology

The 1987 data are based on responses from the 635 institutions on the Early National Estimates Panel (a stratified random sample representative of the universe of 3,422 institutions of higher education in the United States in the 1987 academic year). Selected data items from the Integrated Postsecondary Education Data System (IPEDS) survey forms were requested by telephone from the Early National Estimates Representative of each sample institution between mid-October and mid-November 1987. The data were edited in light of previous years' survey responses (where available) and were resolved for questionable data.

The overall response rate for the 1987 Early National Estimates data collection was 97 percent. Weighted response rates for each type of data collected were: Enrollment--96 percent, Completions--92 percent, and Finance--87 percent. The sample weights were adjusted to account for nonresponse. The sample data were then weighted to national estimates using ratio estimation which uses the previous year's data for the universe of institutions.

The Early National Estimates data are subject to both sampling and nonsampling error. While it is difficult to measure nonsampling error, the magnitude of sampling error can be indicated by the confidence interval for an estimate. For this sample at the 95 percent confidence level, total estimates are within 1 to 2 percent of what would have been obtained from a survey of all institutions of higher education (appendix table). Data for the universe of all postsecondary institutions in the IPEDS surveys will be available in fall 1988.

For more information on the sample selection, data collection, or estimation methodologies, or for individual standard errors for the sample estimates in this report, please contact the authors.

Acknowledgments

CES wishes to thank the institutions in the Early National Estimates Panel for providing the data on which these estimates are based. All those involved in the data collection, data processing, report preparation, and review process worked quickly to release these early estimates. Preliminary data were reviewed by education association representatives, and the draft report was reviewed by peer reviewers from within and outside CES. Of special note is the contribution of the other members of the Analysis, Early Estimates and Resource Surveys Team: Summer Whitener, Paul Mertins, Aurora D'Amico, and Mike Cohen.

Appendix Table.—Accuracy of selected data from the Sample Surveys of Early National Estimates, 1986 and 1987

(In thousands)

Item	Early estimate	95 percent confidence interval		
		Percent range	Lower confidence limit*	Upper confidence limit*
1986 fall enrollment	12,398	± 1.0	12,272	12,523
1987 fall enrollment	12,544	± 1.7	12,335	12,753
1986-87 degrees (associate and higher)	1,813	± 0.8	1,798	1,827
1986-87 revenues	$108,288,120	± 1.0	$107,233,625	$109,342,614
1986-87 expenditures and transfers	$106,424,547	± 1.0	$105,322,017	$107,527,077

*The upper and lower confidence limits shown for each estimate represent the accuracy of these estimates in light of sampling error. Although the actual values of the items are not known for the universe of institutions, the upper and lower limits have been constructed so that the actual values fall between them at the 95 percent confidence level. These margins of error are also presented as a percent of the total estimate in the percent range column.

SOURCE: U.S. Department of Education, Center for Education Statistics, data for 1986 fall enrollment are from the Integrated Postsecondary Education Data System (IPEDS), Sample Survey of Early National Estimates, 1986; data for the remaining items are from the IPEDS Sample Survey of Early National Estimates, 1987.